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10/034,075	01/03/2002	Tomoharu Kajiyama	HIRA.0021	2462
38327	7590	11/12/2004	EXAMINER	
REED SMITH LLP 3110 FAIRVIEW PARK DRIVE, SUITE 1400 FALLS CHURCH, VA 22042			FORMAN, BETTY J	
			ART UNIT	PAPER NUMBER
			1634	
DATE MAILED: 11/12/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/034,075

Applicant(s)

KAJIYAMA ET AL.

Examiner

BJ Forman

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004 & 25 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 9-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1634

## **FINAL ACTION**

### ***Status of the Claims***

1. This action is in response to papers filed 10 August 2004 in which claims 1 and 9-12 were amended, claims 5-8 were canceled and claims 13-30 were added and further in response to papers filed 25 August 2004 in which claims 1 and 18 were amended and claims 31 was added. **The papers filed 25 August 2004 incorrectly use the status identifier "Original" for claims 13-30.** The correct identifier for these claims is "Previously Presented" (see 37 C.F.R. § 1.121).

The amendments have been thoroughly reviewed and entered. The previous rejections in the Office Action dated 25 August 2004 under 35 U.S.C. 102 and 103 are withdrawn in view of the amendments. The previous rejection under obviousness-type double patenting is maintained. Applicant's arguments have been thoroughly reviewed and are discussed below as they apply to the instant grounds for rejection. New grounds for rejection, necessitated by amendment, are discussed.

Claims 1-4 and 9-31 are under prosecution.

### ***Drawings***

2. The replacement drawings of Fig. 2 A and 2B received on 10 August 2004 are acknowledged and approved by the examiner.

### ***Claim Objections***

3. Claim 31 is objected to because of the following informalities: The word "the" is repeated at line 14. Appropriate correction is required.

Art Unit: 1634

**Claim Rejections - 35 USC § 112**

**35 U.S.C. 112: First Paragraph**

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 17 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The recitation "a distance between one of said islands and one the heat circuits is 10-500µm" is added to the new claims 17 and 30. However, the specification fails to define or provide any disclosure to support such claim recitation.

MPEP 2163.06 notes "IF NEW MATTER IS ADDED TO THE CLAIMS, THE EXAMINER SHOULD REJECT THE CLAIMS UNDER 35 U.S.C. 112, FIRST PARAGRAPH - WRITTEN DESCRIPTION REQUIREMENT. *IN RE RASMUSSEN*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981)." MPEP 2163.02 teaches that "Whenever the issue arises, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed...If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application." MPEP 2163.06 further notes "WHEN AN AMENDMENT IS FILED IN REPLY TO AN OBJECTION OR REJECTION BASED ON 35 U.S.C. 112, FIRST PARAGRAPH, A STUDY OF THE ENTIRE APPLICATION IS OFTEN NECESSARY TO DETERMINE WHETHER OR NOT "NEW MATTER" IS INVOLVED. **APPLICANT SHOULD THEREFORE SPECIFICALLY POINT OUT THE SUPPORT FOR ANY AMENDMENTS MADE TO THE DISCLOSURE**" (emphasis added).

**35 U.S.C. 112: Second Paragraph**

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1634

7. Claims 13-15, 26-28 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 13 and 26 are each indefinite for the recitation "heat circuits are installed among the islands" because it is unclear whether the recitation defines some future application or intended (i.e. installing) use for the device. The recitation is further unclear because "among" is a non-descriptive positional term. Hence it is unclear what position the circuits are to be installed.

b. Claims 14 and 27 are each indefinite for the recitation "thermal conductor layers are formed among said islands" because it is unclear whether the recitation defines some future application or intended use (i.e. forming) for the device. The recitation is further unclear because "among" is a non-descriptive positional term. Hence it is unclear what position the circuits are to be installed.

c. Claims 15 and 28 are each indefinite for the recitation "islands are formed in a mesh structure" because it is unclear whether the recitation defines some future application or intended use (i.e. forming) for the device or whether the recitation defines how the islands are made (e.g. the mesh being a mold for forming the islands which are then used as part of the device).

d. Claim 31 is indefinite for the recitation "reaction products of polylysine and functional groups not binding with the probes on the first side of the membrane" because it is unclear whether the recitation modifies the membrane or whether the recitation describes an intended use i.e. a reaction that takes place within the apparatus. For purposes of examination, the recitation is interpreted as an intended use.

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 13-14, 18, 26-27 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Yasuda et al (U.S. Patent No. 6,093,370, filed 10 June 1999).

Regarding Claims 1, 18 and 31, Yasuda et al disclose a biochemical reaction detection apparatus comprising a first membrane, a plurality of island on one side of the membrane and probe cells for immobilizing probes said probe cells being provided on an opposite side of the membrane wherein the islands are spaced from each other with intervals filled with air as illustrated (Fig. 24, #443) and each of the islands is provided with a temperature controller for heating and temperature control of the probe cells wherein the heating and temperature of the probe cells are controlled independently (Column 17, lines 35-53) and further comprising a cover on top of the probe cells for accommodating a sample solution between the membrane and cover (Column 17, lines 35-53 and Fig. 24-25). While Yasuda et al do not teach a reaction between polylysine and function groups, as stated above, the recitation of Claim 31 is interpreted as an intended use that does not define or limit the apparatus.

Regarding Claims 13 and 26, Yasuda et al disclose the apparatus comprising heat circuits among the islands (Column 17, line 39 and Fig. 24, # 443).

Art Unit: 1634

Regarding Claims 14 and 27, Yasuda et al disclose thermal conductive layers among the islands i.e. heat sources (Column 17, line 39 and Fig. 24, # 443).

10. Claim 4 and 21 rejected under 35 U.S.C. 102(e) as being anticipated by Yasuda et al (U.S. Patent No. 6,093,370, filed 10 June 1999) as defined Handbook of Chemistry and Physics, The Chemical Rubber Publishing Co., Cleveland, Ohio, 1963, pages 2527-2531).

Regarding Claims 4 and 21, Yasuda et al disclose a biochemical reaction detection apparatus comprising a first membrane, a plurality of island on one side of the membrane and probe cells for immobilizing probes said probe cells being provided on an opposite side of the membrane wherein the islands are spaced from each other with intervals filled with air as illustrated (Fig. 24, #443) and each of the islands is provided with a temperature controller for heating and temperature control of the probe cells wherein the heating and temperature of the probe cells are controlled independently (Column 17, lines 35-53) and further comprising a cover on top of the probe cells for accommodating a sample solution between the membrane and cover (Column 17, lines 35-53 and Fig. 24-25) wherein the membrane is thermally insulating (Column 11, lines 44-46) e.g. glass (Column 13, lines 35-57).

Yasuda et al do not specifically teach the heat conductivity of the membrane. However, the Handbook of Chemistry and Physics provides the thermal conductivity of glass as being between 0.001-0.0025 calories/second · centimeter (depending on the type of glass). Converting calories/second · centimeter to w/mk (1 calorie/second · centimeter =418.5 w/mk) the glass substrate of Yasuda et al has a conductivity of between 1.0 and 0.4 w/mk which is less than 10w/mk as instantly claimed.



Art Unit: 1634

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lund et al (U.S. Patent No. 6,106,784, filed 26 September 1997) in view of Konrad (U.S. Patent No. 5,789,167, issued 4 August 1998).

Regarding Claim 1, Lund et al disclose an apparatus comprising a first membrane, a plurality of islands provided on a first side of the membrane and probe cells provided on a side opposite the first side of the membrane, wherein the islands are spaced from each other with intervals filled with air (Fig. 12 and Column 4, lines 50-54) and each of the islands includes a temperature controller for controlling heat and temperature of each probe cell independently (Column 3, lines 9-42) whereby each temperature of each cell is individually controlled (Abstract and Column 3, line 49-51). While Lund et al are silent regarding a cover over the probe cells, covering sample solutions was well known and routinely practiced in the art at the time the claimed invention was made as taught by Konrad.

Konrad teach a similar device comprising a plurality of probe cell for probe immobilization on one side of a membrane and a cover placed on top of the probe cells for accommodating sample solution layer between the cover and the probe cells whereby a detection area is formed and evaporation is prevented (Column 12, lines 14-26 and Column 15, lines 27-30). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the cover of Konrad to the device of Lund et al for the expected benefit of providing a detection area and preventing evaporation as taught by Konrad (Column 12, lines 14-26 and Column 15, lines 27-30).



Art Unit: 1634

Regarding Claims 2-3, Lund et al disclose the apparatus wherein the intervals between islands is 100 $\mu$ m or longer (Column 3, lines 10-13).

13. Claims 2-3, 9-12, 15-17, 19-20, 22-25 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuda et al (U.S. Patent No. 6,093,370, filed 10 June 1999) in view of Sosnowski et al (U.S. Patent No. 6,051,380, filed 5 December 1997).

Regarding Claims 2-3, 17, 19-20 and 30, Yasuda et al disclose a biochemical reaction detection apparatus comprising a first membrane, a plurality of island on one side of the membrane and probe cells for immobilizing probes said probe cells being provided on an opposite side of the membrane wherein the islands are spaced from each other with intervals filled with air as illustrated (Fig. 24, #443) and each of the islands is provided with a temperature controller for heating and temperature control of the probe cells wherein the heating and temperature of the probe cells are controlled independently (Column 17, lines 35-53) and further comprising a cover on top of the probe cells for accommodating a sample solution between the membrane and cover (Column 17, lines 35-53 and Fig. 24-25) but they are silent regarding the length of intervals and/or distance between the islands. However, intervals of longer than 50 $\mu$  m and longer than 100 $\mu$  m were well known in the art at the time the claimed invention was made as taught by Sosnowski et al (Column 23, lines 16-23 and 52-54). Sosnowski et al teach a similar biochemical detection apparatus comprising a first membrane, a plurality of island on one side of the membrane and probe cells for immobilizing probes said probe cells being provided on the other (opposite) side of the membrane wherein the islands are spaced from each other with intervals (Column 21, lines 36-Column 22, line 30) wherein due to the complexity of underlying circuitry, the interval (spacing) between islands is

Art Unit: 1634

determined based on the number of islands i.e. as the number of islands increase, the spacing increases proportionally (Column 23, lines 16-23) wherein a support having 64 microlocations has intervals of  $50\mu\text{m}$  (Column 23, lines 46-54). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the island intervals of Sosnowski et al to the apparatus of Yasuda et al and to design their apparatus to have intervals of  $100\mu\text{m}$  or longer based on the teaching of Sosnowski et al wherein the as the number of islands increase, the spacing increases proportionally (Column 23, lines 16-23). Therefore, one of ordinary skill in the art would have been motivated to provide intervals of  $100\mu\text{m}$  or longer based on a desired number of island being greater than 128 as suggested by the teaching of Sosnowski et al wherein  $50\mu\text{m}$  intervals are required for 64 islands and intervals increase proportionally with the number of islands based on the complexity of required circuitry (Sosnowski et al, Column 23, lines 16-23 and 52-54).

Regarding Claims 9-12 and 22-25, Sosnowski et al teach the similar device wherein the membrane comprises a metal (e.g. silicon nitride, silicon oxide or aluminum oxide) and has a thickness of less than  $5\mu\text{m}$  (Column 24, lines 23-67) wherein the silicon component provide "important properties" for the device e.g. better contact and improved sealing with circuitry and is less relative with reagents used on the surface (Column 24, line 65-Column 25, line 7).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the silicon components taught by Sosnowski et al to the substrate of Yasuda et al for the expected benefits of better contact and improved sealing with circuitry and is less relative with reagents used on the surface which Sosnowski et al defines as important properties (Column 24, line 65-Column 25, line 7).

It would have been further obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the substrate of Yasuda et al to provide a membrane substrate of less than  $5\mu\text{m}$  thick based on a well known thickness taught by Sosnowski et al

Art Unit: 1634

(e.g. Column 24, lines 23-40) because one would have had a reasonable expectation of success to do so.

It is noted that *In re Aller*, 220 F.2d 454,456, 105 USPQ 233,235 states where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum by routine experimentation. Hence, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify/adjust the membrane thickness of Yasuda, using routine experimentation, to obtain the instantly claimed thickness for the expected benefit of optimizing function of the device.

Furthermore, the courts have stated that “where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.” *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

Regarding Claims 15 and 28, Yasuda et al teach the apparatus comprising electrodes and they teach “mesh electrodes” (Column 9, lines 25). As stated above, it is unclear how the recitation of Claim 28 defines the apparatus. Because Yasuda teaches mesh electrodes and because it is unclear how the recitation limits the apparatus, the claims are interpreted as encompassing the apparatus of Yasuda.

Regarding Claims 16 and 29, Yasuda et al teach the apparatus wherein the heat circuits are positioned among the islands (Column 17, lines 35-53) but they are silent regarding the composition of the circuits. However, Sosnowski et al teach the similar device comprising well known circuits wherein the circuitry is made of Si, Au, Ag or Cu (Column 21, lines 41-44). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the circuit composition of Sosnowski to the circuits of

Art Unit: 1634

Yasuda et al based on the well known use of the composition as taught by Sosnowski (Column 21, lines 41-44).

### ***Double Patenting***

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,428,749 in view of Konrad (U.S. Patent No. 5,789,167, issued 4 August 1998). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to a biochemical reaction detection chip and differ only in the limitations of instant Claims 2-3 and 6-7 and in the arrangement of the limitations e.g. independent Claim 1 of the '749 patent recites the substrate has a heat conductivity of 10w/mk or less while instant Claim 8 which depends from Claim 5 recites this conductivity limitation. Instant Claims 2-3 and 6-7 are drawn to the length of the intervals between the islands. While the '749 claims do not recite these interval limitations, the disclosure of the specification defines their claimed islands as having intervals equal to those instantly claimed (Column 3, lines 30-31). Instant Claim 1 further differs from in that of the '749 patent claims in that islands are covered and separated

Art Unit: 1634

by intervals filled with air. However, the patent apparatus as illustrated and taught throughout the specification provides islands covered and separated by intervals filled with air. Hence, the preferred embodiment of the patent apparatus comprises the instantly claimed intervals filled with air.

Furthermore, Konrad teach a similar device comprising a plurality of probe cell for probe immobilization on one side of a membrane and a cover placed on top of the probe cells for accommodating sample solution layer between the cover and the probe cells whereby a detection area is formed and evaporation is prevented (Column 12, lines 14-26 and Column 15, lines 27-30). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the cover of Konrad to the device of Lund et al for the expected benefit of providing a detection area and preventing evaporation as taught by Konrad (Column 12, lines 14-26 and Column 15, lines 27-30).

For all the reasons stated above, the instantly claimed detection chip is obvious in view of the '749 detection chip, as defined by the patent disclosure (Column 3, lines 30-31).

### **Response to Arguments**

16. Applicant argues that the instant claims differ from the patent claims because the instant claims, as amended, are now drawn to "a cover placed on top of the probe cells". The argument has been considered but is not found persuasive because while the patent claims are not limited to a cover, placing a cover over the probe cells would have been an obvious element to one of ordinary skill in the art based on the teaching of Konrad. Furthermore, the front of the patent illustrates the patented invention. The illustration includes a cover. For these reasons, the rejection is maintained.

Art Unit: 1634

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### **Conclusion**

18. No claim is allowed.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (571) 272-0745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.




Art Unit: 1634

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



BJ Forman, Ph.D.  
Primary Examiner  
Art Unit: 1634  
November 10, 2004